

**Amount of substance, Gases, Russian Federation, VNIIM (D.I. Mendeleyev Institute for Metrology, Rostekhregulirovaniye of Russia)**

Note: In the case where an uncertainty range is given, the expanded uncertainty range is expressed as the uncertainty of the smallest value of the quantity to the uncertainty of the largest value of the quantity.

Note: The expanded uncertainties correspond to  $k = 2$  (level of confidence 95%)

NMI Service Identifier	Measurement Service Category	Matrix	Mesurand		Dissemination Range of Measurement Capability			Range of Expanded Uncertainties as Disseminated				Range of Certified Values in Reference Materials			Range of Expanded Uncertainties for Certified Value				Mechanism(s) for Measurement Service Delivery	Comments
			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
4.1-01	High Purity	hydrogen	carbon monoxide	Amount-of-substance fraction	2	10	µmol/mol	6	4	%	Yes								Calibration	
			carbon dioxide	Amount-of-substance fraction	2	10	µmol/mol	6	4	%	Yes									
			nitrogen	Amount-of-substance fraction	2	10	µmol/mol	6	4	%	Yes									
			oxygen	Amount-of-substance fraction	2	10	µmol/mol	6	4	%	Yes									
			total hydrocarbons	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			water	Amount-of-substance fraction	1	10	µmol/mol	30	8	%	Yes									
4.1-02	High Purity	nitrogen	carbon monoxide	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes								Calibration	
			carbon dioxide	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			argon	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			oxygen	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			neon	Amount-of-substance fraction	0.2	10	µmol/mol	30	6	%	Yes									
			hydrogen	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
			total nitrogen oxides	Amount-of-substance fraction	0.002	1	µmol/mol	30	6	%	Yes									
			total hydrocarbons	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			water	Amount-of-substance fraction	0.5	10	µmol/mol	30	8	%	Yes									
4.1-03	High Purity	helium	carbon monoxide	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes								Calibration	
			carbon dioxide	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			nitrogen	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			oxygen	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			total hydrocarbons	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			neon	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			argon	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			water	Amount-of-substance fraction	0.5	10	µmol/mol	30	8	%	Yes									
4.1-04	High Purity	oxygen	neon	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes								Calibration	

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
			argon	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			hydrogen	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			nitrogen	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			carbon monoxide	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			carbon dioxide	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			methane	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			krypton	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			xenon	Amount-of-substance fraction	0.1	10	µmol/mol	30	6	%	Yes									
			water	Amount-of-substance fraction	0.5	10	µmol/mol	30	8	%	Yes									
4.1-05	High Purity	methane	carbon dioxide	Amount-of-substance fraction	2	10	µmol/mol	6	4	%	Yes								Calibration	
			carbon monoxide	Amount-of-substance fraction	2	10	µmol/mol	6	4	%	Yes									
			hydrogen	Amount-of-substance fraction	2	10	µmol/mol	6	4	%	Yes									

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
			nitrogen	Amount-of-substance fraction	2	10	$\mu\text{mol/mol}$	6	4	%	Yes									
			oxygen	Amount-of-substance fraction	2	10	$\mu\text{mol/mol}$	6	4	%	Yes									
			water	Amount-of-substance fraction	2	10	$\mu\text{mol/mol}$	15	8	%	Yes									
			ethane	Amount-of-substance fraction	0.1	100	$\mu\text{mol/mol}$	20	3	%	Yes									
			higher hydrocarbons	Amount-of-substance fraction	10	1000	$\mu\text{mol/mol}$	20	3	%	Yes									
4.1-06	High Purity	synthetic air	carbon monoxide	Amount-of-substance fraction	0.1	1	$\mu\text{mol/mol}$	30	6	%	Yes								Calibration	
			carbon dioxide	Amount-of-substance fraction	0.1	1	$\mu\text{mol/mol}$	30	6	%	Yes									
			total nitrogen oxides	Amount-of-substance fraction	0.01	1	$\mu\text{mol/mol}$	30	6	%	Yes									
			total hydrocarbons	Amount-of-substance fraction	0.15	1	$\mu\text{mol/mol}$	30	6	%	Yes									
			water	Amount-of-substance fraction	0.5	10	$\mu\text{mol/mol}$	30	8	%	Yes									
4.2-01	Environmental	nitrogen	carbon monoxide	Amount-of-substance fraction	1	10	$\mu\text{mol/mol}$	5	1	%	Yes								Calibration	
4.2-01	Environmental	air	carbon monoxide	Amount-of-substance fraction	1	10	$\mu\text{mol/mol}$	5	1	%	Yes								Calibration	

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
4.2-02	Environmental	nitrogen	carbon monoxide	Amount-of-substance fraction	10	500	$\mu\text{mol/mol}$	1	1	%	Yes	10	500	$\mu\text{mol/mol}$	1	1	%	Yes	Calibration	
																		PRM SM 06.02.004		
4.2-02	Environmental	air	carbon monoxide	Amount-of-substance fraction	10	500	$\mu\text{mol/mol}$	1	1	%	Yes	10	500	$\mu\text{mol/mol}$	1	1	%	Yes	Calibration	
																		PRM SM 06.02.004		
4.2-03	Environmental	nitrogen	carbon monoxide	Amount-of-substance fraction	1	5	$\text{mmol/mol}$	0.5	0.5	%	Yes	1	5	$\text{mmol/mol}$	0.5	0.5	%	Yes	Calibration	
																		PRM SM 06.02.005		
4.2-03	Environmental	air	carbon monoxide	Amount-of-substance fraction	1	5	$\text{mmol/mol}$	0.5	0.5	%	Yes	1	5	$\text{mmol/mol}$	0.5	0.5	%	Yes	Calibration	
																		PRM SM 06.02.005		
4.2-04	Environmental	nitrogen	carbon monoxide	Amount-of-substance fraction	5	100	$\text{mmol/mol}$	0.5	0.2	%	Yes	5	100	$\text{mmol/mol}$	0.5	0.2	%	Yes	Calibration	
																		PRM SM 06.02.006		
4.2-04	Environmental	air	carbon monoxide	Amount-of-substance fraction	5	100	$\text{mmol/mol}$	0.5	0.2	%	Yes	5	100	$\text{mmol/mol}$	0.5	0.2	%	Yes	Calibration	
																		PRM SM 06.02.006		
4.2-06	Environmental	nitrogen	carbon dioxide	Amount-of-substance fraction	1	25	$\text{mmol/mol}$	1.4	0.5	%	Yes								Calibration	
4.2-06	Environmental	air	carbon dioxide	Amount-of-substance fraction	1	25	$\text{mmol/mol}$	1.4	0.5	%	Yes								Calibration	

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
4.2-07	Environmental	nitrogen	carbon dioxide	Amount-of-substance fraction	25	300	mmol/mol	0.5	0.15	%	Yes	25	300	mmol/mol	0.5	0.15	%	Yes	Calibration	
																		PRM SM 06.02.018		
4.2-07	Environmental	air	carbon dioxide	Amount-of-substance fraction	25	300	mmol/mol	0.5	0.15	%	Yes	25	300	mmol/mol	0.5	0.15	%	Yes	Calibration	
																		PRM SM 06.02.018		
4.2-08	Environmental	nitrogen	nitrogen monoxide	Amount-of-substance fraction	0.1	100	µmol/mol	5	1.6	%	Yes								Calibration	
4.2-09	Environmental	nitrogen	nitrogen monoxide	Amount-of-substance fraction	100	1000	µmol/mol	1.6	1.6	%	Yes	100	1000	µmol/mol	1.6	1.6	%	Yes	Calibration	
																		PRM SM 06.02.014		
4.2-10	Environmental	nitrogen	nitrogen monoxide	Amount-of-substance fraction	5	25	mmol/mol	0.6	0.3	%	Yes	10	25	mmol/mol	0.6	0.3	%	Yes	Calibration	
																		PRM SM 06.02.019		
4.2-11	Environmental	nitrogen	nitrogen dioxide	Amount-of-substance fraction	0.1	50	µmol/mol	5	1.5	%	Yes								Calibration	
4.2-11	Environmental	air	nitrogen dioxide	Amount-of-substance fraction	0.1	50	µmol/mol	5	1.5	%	Yes								Calibration	
4.2-12	Environmental	nitrogen	nitrogen dioxide	Amount-of-substance fraction	50	5000	µmol/mol	1.5	1.5	%	Yes	50	5000	µmol/mol	1.5	1.5	%	Yes	Calibration	
																		PRM SM 06.02.015		
4.2-12	Environmental	air	nitrogen dioxide	Amount-of-substance fraction	50	5000	µmol/mol	1.5	1.5	%	Yes	50	5000	µmol/mol	1.5	1.5	%	Yes	Calibration	

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
																			PRM SM 06.02.015	
4.2-13	Environmental	nitrogen	nitrogen dioxide	Amount-of-substance fraction	5	25	mmol/mol	1	0.3	%	Yes	5	25	mmol/mol	1	0.3	%	Yes	Calibration	
																			PRM SM 06.02.020	
4.2-13	Environmental	air	nitrogen dioxide	Amount-of-substance fraction	5	25	mmol/mol	1	0.3	%	Yes	5	25	mmol/mol	1	0.3	%	Yes	Calibration	
																			PRM SM 06.02.020	
4.2-14	Environmental	nitrogen	sulfur dioxide	Amount-of-substance fraction	0.1	100	µmol/mol	5	1	%	Yes								Calibration	
4.2-15	Environmental	nitrogen	sulfur dioxide	Amount-of-substance fraction	100	1000	µmol/mol	1	1	%	Yes	100	1000	µmol/mol	1	1	%	Yes	Calibration	
																			PRM SM 06.02.013	
4.2-16	Environmental	nitrogen	propane	Amount-of-substance fraction	5	20	µmol/mol	2	1	%	Yes								Calibration	
4.2-17	Environmental	synthetic air	methane	Amount-of-substance fraction	10	5000	µmol/mol	1	1	%	Yes	10	5000	µmol/mol	1	1	%	Yes	Calibration	
																			PRM SM 06.02.008	
4.2-18	Environmental	nitrogen	methane	Amount-of-substance fraction	5	20	mmol/mol	0.5	0.5	%	Yes	5	20	mmol/mol	0.5	0.5	%	Yes	Calibration	
																			PRM SM 06.02.009	
4.2-19	Environmental	nitrogen	carbon monoxide	Amount-of-substance fraction	5	50	mmol/mol	0.5	0.5	%	Yes	5	50	mmol/mol	0.5	0.5	%	Yes	Calibration	
																			PRM SM 06.02.029	

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			carbon dioxide	Amount-of-substance fraction	40	160	mmol/mol	0.5	0.5	%	Yes	40	160	mmol/mol	0.5	0.5	%	Yes		
			propane	Amount-of-substance fraction	0.1	3	mmol/mol	0.5	0.5	%	Yes	0.1	3	mmol/mol	0.5	0.5	%	Yes		
4.3-01	Fuel	natural gas	methane	Amount-of-substance fraction	763.7	907.6	mmol/mol	0.05	0.05	%	Yes	763.7	907.6	mmol/mol	0.05	0.05	%	Yes	Calibration	
			ethane	Amount-of-substance fraction	30	93	mmol/mol	0.8	0.8	%	Yes	30	93	mmol/mol	0.8	0.8	%	Yes	PRM SM 06.03.001	
			propane	Amount-of-substance fraction	5	33	mmol/mol	1.3	1.3	%	Yes	5	33	mmol/mol	1.3	1.3	%	Yes	PRM SM 06.03.002	
			butane	Amount-of-substance fraction	1	10	mmol/mol	0.5	0.5	%	Yes	1	10	mmol/mol	0.5	0.5	%	Yes		
			carbon dioxide	Amount-of-substance fraction	5	30	mmol/mol	1	1	%	Yes	5	30	mmol/mol	1	1	%	Yes		
			nitrogen	Amount-of-substance fraction	40	135	mmol/mol	0.8	0.8	%	Yes	40	135	mmol/mol	0.8	0.8	%	Yes		
4.6-01	Other	synthetic air	methane	Amount-of-substance fraction	5	23	mmol/mol	0.8	0.6	%	Yes	5	23	mmol/mol	0.4	0.3	%	Yes	Calibration	
																	PRM SM 06.02.027			
4.6-02	Other	synthetic air	propane	Amount-of-substance fraction	5	10	mmol/mol	0.8	0.4	%	Yes	5	10	mmol/mol	0.4	0.2	%	Yes	Calibration	
																	PRM SM 06.02.028			
4.2-20	Environmental	nitrogen	sulfur dioxide	Amount-of-substance fraction	5	25	mmol/mol	1	1	%	Yes	5	25	mmol/mol	1	1	%	Yes	Calibration	

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																		PRM SM 06.02.021		
4.2-21	Environmental	nitrogen	oxygen	Amount-of-substance fraction	1	5	mmol/mol	0.5	0.5	%	Yes	1	5	mmol/mol	0.5	0.5	%	Yes	Calibration	
																		PRM SM 06.02.001		
4.2-22	Environmental	nitrogen	oxygen	Amount-of-substance fraction	5	100	mmol/mol	0.5	0.2	%	Yes	5	100	mmol/mol	0.5	0.2	%	Yes	Calibration	
																		PRM SM 06.02.002		
4.2-23	Environmental	nitrogen	oxygen	Amount-of-substance fraction	100	250	mmol/mol	0.2	0.2	%	Yes	100	250	mmol/mol	0.2	0.2	%	Yes	Calibration	
																		PRM SM 06.02.003		
4.2-24	Environmental	nitrogen	propane	Amount-of-substance fraction	20	5000	µmol/mol	1	1	%	Yes	20	5000	µmol/mol	1	1	%	Yes	Calibration	
																		PRM SM 06.02.010		
4.2-25	Environmental	nitrogen	propane	Amount-of-substance fraction	5	10	mmol/mol	1	0.5	%	Yes	5	10	mmol/mol	1	0.5	%	Yes	Calibration	
																		PRM SM 06.02.011		
4.2-26	Environmental	nitrogen	hydrogen sulfide	Amount-of-substance fraction	20	1000	µmol/mol	2	1.5	%	Yes	20	1000	µmol/mol	2	1.5	%	Yes	Calibration	
																		PRM SM 06.02.016		
4.2-27	Environmental	nitrogen	ammonia	Amount-of-substance fraction	100	1000	µmol/mol	5	5	%	Yes								Calibration	
4.2-28	Environmental	nitrogen	hydrogen chloride	Amount-of-substance fraction	20	1000	µmol/mol	5	3	%	Yes								Calibration	

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4.2-29a	Environmental	nitrogen	benzene	Amount-of-substance fraction	5	1000	nmol/mol	5	5	%	Yes								Calibration	
4.2-29b	Environmental	air	benzene	Amount-of-substance fraction	5	1000	nmol/mol	5	5	%	Yes								Calibration	
4.2-30a	Environmental	nitrogen	toluene	Amount-of-substance fraction	5	1000	nmol/mol	5	5	%	Yes								Calibration	
4.2-30b	Environmental	air	toluene	Amount-of-substance fraction	5	1000	nmol/mol	5	5	%	Yes								Calibration	
4.2-31a	Environmental	nitrogen	benzene	Amount-of-substance fraction	0.1	100	µmol/mol	5	2	%	Yes	0.1	100	µmol/mol	5	2	%	Yes	Calibration	
																		PRM SM 06.05.002		
4.2-31b	Environmental	air	benzene	Amount-of-substance fraction	0.1	100	µmol/mol	5	2	%	Yes	0.1	100	µmol/mol	5	2	%	Yes	Calibration	
																		PRM SM 06.05.002		
4.2-32a	Environmental	nitrogen	toluene	Amount-of-substance fraction	0.1	100	µmol/mol	5	2	%	Yes	0.1	100	µmol/mol	5	2	%	Yes	Calibration	
																		PRM SM 06.05.003		
4.2-32b	Environmental	air	toluene	Amount-of-substance fraction	0.1	100	µmol/mol	5	2	%	Yes	0.1	100	µmol/mol	5	2	%	Yes	Calibration	
																		PRM SM 06.05.003		
4.2-34a	Environmental	nitrogen	1-butanol	Amount-of-substance fraction	0.5	20	µmol/mol	5	2	%	Yes	0.5	20	µmol/mol	5	2	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.005		

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NMI Service Identifier	Measurement Service Category	Matrix	Mesurand		Dissemination Range of Measurement Capability			Range of Expanded Uncertainties as Disseminated				Range of Certified Values in Reference Materials			Range of Expanded Uncertainties for Certified Value				Mechanism(s) for Measurement Service Delivery	Comments
			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
4.2-34b	Environmental	air	1-butanol	Amount-of-substance fraction	0.5	20	µmol/mol	5	2	%	Yes	0.5	20	µmol/mol	5	2	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.005		
4.2-35a	Environmental	nitrogen	methanol	Amount-of-substance fraction	0.5	50	µmol/mol	5	2	%	Yes	0.5	50	µmol/mol	5	2	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.006		
4.2-35b	Environmental	air	methanol	Amount-of-substance fraction	0.5	50	µmol/mol	5	2	%	Yes	0.5	50	µmol/mol	5	2	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.006		
4.2-36a	Environmental	nitrogen	ethylacetate	Amount-of-substance fraction	0.5	20	µmol/mol	5	2	%	Yes	0.5	20	µmol/mol	5	2	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.007		
4.2-36b	Environmental	air	ethylacetate	Amount-of-substance fraction	0.5	20	µmol/mol	5	2	%	Yes	0.5	20	µmol/mol	5	2	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.007		
4.2-37a	Environmental	nitrogen	n-hexane	Amount-of-substance fraction	0.1	20	µmol/mol	5	2	%	Yes	0.1	20	µmol/mol	5	2	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.008		
4.2-37b	Environmental	air	n-hexane	Amount-of-substance fraction	0.1	20	µmol/mol	5	2	%	Yes	0.1	20	µmol/mol	5	2	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.008		
4.2-42a	Environmental	nitrogen	ethylbenzene	Amount-of-substance fraction	0.5	20	µmol/mol	5	2	%	Yes	0.5	20	µmol/mol	5	2	%	Yes	Calibration	Approved on 09 December 2004

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
																		PRM SM 06.05.029		
4.2-42b	Environmental	air	ethylbenzene	Amount-of-substance fraction	0.5	20	µmol/mol	5	2	%	Yes	0.5	20	µmol/mol	5	2	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.029		
4.2-45a	Environmental	nitrogen	sulfur dioxide	Amount-of-substance fraction	0.1	20	µmol/mol	5	1.5	%	Yes	0.1	20	µmol/mol	5	1.5	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.014		
																		PRM SM 06.05.015		
4.2-45b	Environmental	air	sulfur dioxide	Amount-of-substance fraction	0.1	20	µmol/mol	5	1.5	%	Yes	0.1	20	µmol/mol	5	1.5	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.014		
																		PRM SM 06.05.015		
4.2-46a	Environmental	nitrogen	hydrogen sulfide	Amount-of-substance fraction	0.1	20	µmol/mol	5	1.5	%	Yes	0.1	20	µmol/mol	5	1.5	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.016		
4.2-46b	Environmental	air	hydrogen sulfide	Amount-of-substance fraction	0.1	20	µmol/mol	5	1.5	%	Yes	0.1	20	µmol/mol	5	1.5	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.016		
4.2-47a	Environmental	nitrogen	nitrogen dioxide	Amount-of-substance fraction	0.1	20	µmol/mol	5	1.5	%	Yes	0.1	20	µmol/mol	5	1.5	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.017		

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
4.2-47b	Environmental	air	nitrogen dioxide	Amount-of-substance fraction	0.1	20	µmol/mol	5	1.5	%	Yes	0.1	20	µmol/mol	5	1.5	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.017		
4.2-48a	Environmental	nitrogen	ammonia	Amount-of-substance fraction	1	100	µmol/mol	5	2	%	Yes	1	100	µmol/mol	5	2	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.018		
4.2-48b	Environmental	air	ammonia	Amount-of-substance fraction	1	100	µmol/mol	5	2	%	Yes	1	100	µmol/mol	5	2	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.05.018		
4.2-49	Environmental	nitrogen	carbon dioxide	Amount-of-substance fraction	50	1000	µmol/mol	1	1	%	Yes	50	1000	µmol/mol	1	1	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.02.007		
4.4-01	Forensic	nitrogen	ethanol	Amount-of-substance fraction	20	100	µmol/mol	2	1	%	Yes	20	100	µmol/mol	2	1	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.02.025		
4.4-02	Forensic	nitrogen	ethanol	Amount-of-substance fraction	100	900	µmol/mol	1	1	%	Yes	100	900	µmol/mol	1	1	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.02.026		
4.6-03a	Other	nitrogen	n-hexane	Amount-of-substance fraction	0.1	5	mmol/mol	1	1	%	Yes	0.1	5	mmol/mol	1	1	%	Yes	Calibration	Approved on 09 December 2004
																		PRM SM 06.02.012		
4.6-03b	Other	air	n-hexane	Amount-of-substance fraction	0.1	5	mmol/mol	1.5	1	%	Yes	0.1	5	mmol/mol	1.5	1	%	Yes	Calibration	Approved on 09 December 2004

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
																		PRM SM 06.02.022		
4.3-03	Fuel	natural gas	methane	Molar fraction	750	997	mmol/mol	0.25	0.03	%	Yes	750	997	mmol/mol	0.25	0.03	%	Yes	PRM SM 06.03.002 plus calibration	Approved on 07 February 2005
			helium	Molar fraction	0.1	5	mmol/mol	5	0.5	%	Yes	0.1	5	mmol/mol	5	0.5	%	Yes		
			nitrogen	Molar fraction	0.5	120	mmol/mol	5	0.5	%	Yes	0.5	120	mmol/mol	5	0.5	%	Yes		
			carbon dioxide	Molar fraction	0.5	40	mmol/mol	5	0.5	%	Yes	0.5	40	mmol/mol	5	0.5	%	Yes		
			ethane	Molar fraction	0.5	150	mmol/mol	5	0.5	%	Yes	0.5	150	mmol/mol	5	0.5	%	Yes		
			propane	Molar fraction	0.1	60	mmol/mol	5	0.5	%	Yes	0.1	60	mmol/mol	5	0.5	%	Yes		
			i-butane	Molar fraction	0.1	40	mmol/mol	5	1.0	%	Yes	0.1	40	mmol/mol	5	1.0	%	Yes		
			n-butane	Molar fraction	0.1	40	mmol/mol	5	1.0	%	Yes	0.1	40	mmol/mol	5	1.0	%	Yes		
			iso-pentane	Molar fraction	0.1	5	mmol/mol	5	1.0	%	Yes	0.1	5	mmol/mol	5	1.0	%	Yes		
			n-pentane	Molar fraction	0.1	5	mmol/mol	5	1.0	%	Yes	0.1	5	mmol/mol	5	1.0	%	Yes		
			neo-pentane	Molar fraction	0.1	0.5	mmol/mol	5	1.5	%	Yes	0.1	0.5	mmol/mol	5	1.5	%	Yes		
			n-hexane	Molar fraction	0.1	5	mmol/mol	5	1.0	%	Yes	0.1	5	mmol/mol	5	1.0	%	Yes		
4.3-04	Fuel	natural gas	methane	Molar fraction	750	997	mmol/mol	0.25	0.03	%	Yes	750	997	mmol/mol	0.25	0.03	%	Yes	PRM SM 06.03.002 plus calibration	Approved on 07 February 2005
			helium	Molar fraction	0.1	5	mmol/mol	5	0.5	%	Yes	0.01	5	mmol/mol	5	0.5	%	Yes		
			hydrogen	Molar fraction	0.1	5	mmol/mol	5	1.0	%	Yes	0.01	5	mmol/mol	5	1.0	%	Yes		
			oxygen	Molar fraction	0.5	20	mmol/mol	10	1.0	%	Yes	0.05	20	mmol/mol	10	1.0	%	Yes		
			nitrogen	Molar fraction	0.5	120	mmol/mol	5	0.5	%	Yes	0.05	120	mmol/mol	5	0.5	%	Yes		

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
			carbon dioxide	Molar fraction	0.5	40	mmol/mol	5	0.5	%	Yes	0.05	40	mmol/mol	5	0.5	%	Yes		
			ethane	Molar fraction	0.5	150	mmol/mol	5	0.5	%	Yes	0.05	150	mmol/mol	5	0.5	%	Yes		
			propane	Molar fraction	0.1	60	mmol/mol	5	0.5	%	Yes	0.05	60	mmol/mol	5	0.5	%	Yes		
			i-butane	Molar fraction	0.1	40	mmol/mol	5	1.0	%	Yes	0.02	40	mmol/mol	5	1.0	%	Yes		
			n-butane	Molar fraction	0.1	40	mmol/mol	5	1.0	%	Yes	0.02	40	mmol/mol	5	1.0	%	Yes		
			iso-pentane	Molar fraction	0.1	5	mmol/mol	5	1.0	%	Yes	0.01	5	mmol/mol	5	1.0	%	Yes		
			n-pentane	Molar fraction	0.1	5	mmol/mol	5	1.0	%	Yes	0.01	5	mmol/mol	5	1.0	%	Yes		
			neo-pentane	Molar fraction	0.1	0.5	mmol/mol	5	1.5	%	Yes	0.01	0.5	mmol/mol	5	1.5	%	Yes		
			n-hexane	Molar fraction	0.1	5	mmol/mol	5	1.0	%	Yes	0.01	5	mmol/mol	5	1.0	%	Yes		
4.3-05	Fuel	synthetic natural gas mixtures	n-heptane	Molar fraction	0.05	2.5	mmol/mol	8	2	%	Yes	0.05	2.5	mmol/mol	8	2	%	Yes	PRM SM 06.03.003 plus calibration	Approved on 07 February 2005
			n-octane	Molar fraction	0.05	0.5	mmol/mol	8	5	%	Yes	0.05	0.5	mmol/mol	8	5	%	Yes		
			n-nonane	Molar fraction	0.02	0.25	mmol/mol	8	5	%	Yes	0.02	0.25	mmol/mol	8	5	%	Yes		
			n-decane	Molar fraction	0.02	0.1	mmol/mol	8	5	%	Yes	0.02	0.1	mmol/mol	8	5	%	Yes		
			benzene	Molar fraction	0.05	0.5	mmol/mol	8	5	%	Yes	0.05	0.5	mmol/mol	8	5	%	Yes		
			toluene	Molar fraction	0.05	0.5	mmol/mol	8	5	%	Yes	0.05	0.5	mmol/mol	8	5	%	Yes		
4.6-04a	Other, transformer gas	helium	hydrogen	Molar fraction	0.1	1.0	mmol/mol	5	2.5	%	Yes							Calibration	Approved on 07 February 2005	
			oxygen	Molar fraction	0.1	1.0	mmol/mol	5	2.0	%	Yes									

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
			nitrogen	Molar fraction	0.1	1.0	mmol/mol	5	2.0	%	Yes									
			carbon dioxide	Molar fraction	0.2	1.0	mmol/mol	2	1.0	%	Yes									
			carbon monoxide	Molar fraction	0.2	1.0	mmol/mol	2	1.5	%	Yes									
			methane	Molar fraction	0.1	1.0	mmol/mol	2	1.0	%	Yes									
			ethane	Molar fraction	0.1	1.0	mmol/mol	2	1.5	%	Yes									
			ethylene	Molar fraction	0.1	1.0	mmol/mol	2	1.5	%	Yes									
			acetylene	Molar fraction	0.1	1.0	mmol/mol	3	2.0	%	Yes									
4.6-04b	Other, transformer gas	argon	hydrogen	Molar fraction	0.1	1.0	mmol/mol	2	1.0	%	Yes								Calibration	Approved on 07 February 2005
			oxygen	Molar fraction	0.1	1.0	mmol/mol	5	2.0	%	Yes									
			nitrogen	Molar fraction	0.1	1.0	mmol/mol	3	2.0	%	Yes									
			carbon dioxide	Molar fraction	0.2	1.0	mmol/mol	2	2	%	Yes									
			carbon monoxide	Molar fraction	0.2	1.0	mmol/mol	2	2	%	Yes									
			methane	Molar fraction	0.1	1.0	mmol/mol	2	1.0	%	Yes									
			ethane	Molar fraction	0.1	1.0	mmol/mol	2	1.5	%	Yes									
			ethylene	Molar fraction	0.1	1.0	mmol/mol	2	1.0	%	Yes									
			acetylene	Molar fraction	0.1	1.0	mmol/mol	3	1.5		Yes									
4.1-07	High purity	carbon dioxide	hydrogen	Molar fraction	2	20	$\mu\text{mol/mol}$	10	4	%	Yes								Calibration	Approved on 07 February 2005
			nitrogen	Molar fraction	2	100	$\mu\text{mol/mol}$	10	3	%	Yes									

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
			methane	Molar fraction	2	20	µmol/mol	10	5	%	Yes									
			carbon monoxide	Molar fraction	2	20	µmol/mol	10	5	%	Yes									
			water	Molar fraction	0.5	100	µmol/mol	30	5	%	Yes									
4.2-67a	Environmental	nitrogen	carbon tetrafluoride	Amount-of-substance fraction	0.01	100	mmol/mol	2	1	%	Yes	0.01	100	mmol/mol	2	1	%	Yes	PRM SM 06.02.031/1 plus instrument calibration	Approved on 29 April 2005
4.2-67b	Environmental	synthetic air	carbon tetrafluoride	Amount-of-substance fraction	0.01	100	mmol/mol	2	1	%	Yes	0.01	100	mmol/mol	2	1	%	Yes	PRM SM 06.02.031/2 plus instrument calibration	Approved on 29 April 2005
4.2-68a	Environmental	nitrogen	hexafluoroethane	Amount-of-substance fraction	0.01	100	mmol/mol	2	1	%	Yes	0.01	100	mmol/mol	2	1	%	Yes	PRM SM 06.02.031/3 plus instrument calibration	Approved on 29 April 2005
4.2-68b	Environmental	synthetic air	hexafluoroethane	Amount-of-substance fraction	0.01	100	mmol/mol	2	1	%	Yes	0.01	100	mmol/mol	2	1	%	Yes	PRM SM 06.02.031/4 plus instrument calibration	Approved on 29 April 2005
4.2-69a	Environmental	nitrogen	trifluoromethane	Amount-of-substance fraction	0.01	100	mmol/mol	3	1	%	Yes	0.01	100	mmol/mol	3	1	%	Yes	PRM SM 06.02.031/5 plus instrument calibration	Approved on 29 April 2005
4.2-69b	Environmental	synthetic air	trifluoromethane	Amount-of-substance fraction	0.01	100	mmol/mol	3	1	%	Yes	0.01	100	mmol/mol	3	1	%	Yes	PRM SM 06.02.031/6 plus instrument calibration	Approved on 29 April 2005
4.2-70a	Environmental	nitrogen	sulfur hexafluoride	Amount-of-substance fraction	0.01	100	mmol/mol	2	1	%	Yes	0.01	100	mmol/mol	2	1	%	Yes	PRM SM 06.02.031/7 plus instrument calibration	Approved on 29 April 2005
4.2-70b	Environmental	synthetic air	sulfur hexafluoride	Amount-of-substance fraction	0.01	100	mmol/mol	2	1	%	Yes	0.01	100	mmol/mol	2	1	%	Yes	PRM SM 06.02.031/8 plus instrument calibration	Approved on 29 April 2005

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			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
4.2-71a	Environmental	nitrogen	nitrogen trifluoride	Amount-of-substance fraction	0.01	100	mmol/mol	5	1	%	Yes	0.01	100	mmol/mol	5	1	%	Yes	PRM SM 06.02.031/9 plus instrument calibration	Approved on 29 April 2005
4.2-71b	Environmental	synthetic air	nitrogen trifluoride	Amount-of-substance fraction	0.01	100	mmol/mol	5	1	%	Yes	0.01	100	mmol/mol	5	1	%	Yes	PRM SM 06.02.031/10 plus instrument calibration	Approved on 29 April 2005
4.2-72	Environmental	nitrogen	carbon tetrafluoride	Amount-of-substance fraction	0.01	100	mmol/mol	2	1	%	Yes	0.01	100	mmol/mol	2	1	%	Yes	PRM SM 06.02.031 plus instrument calibration	Approved on 29 April 2005
			sulfur hexafluoride		0.01	100	mmol/mol	2	1	%	Yes	0.01	100	mmol/mol	2	1	%	Yes		
			hexafluoroethane		0.01	100	mmol/mol	2	1	%	Yes	0.01	100	mmol/mol	2	1	%	Yes		
			trifluoromethane		0.01	100	mmol/mol	3	1	%	Yes	0.01	100	mmol/mol	3	1	%	Yes		
			nitrogen trifluoride		0.01	100	mmol/mol	5	1	%	Yes	0.01	100	mmol/mol	5	1	%	Yes		
4.2-43a	Environmental	nitrogen	chloroform	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/1 plus instrument calibration	Approved on 24 January 2006
4.2-43b	Environmental	synthetic air	chloroform	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/2 plus instrument calibration	Approved on 24 January 2006
4.2-44a	Environmental	nitrogen	dichloromethane	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/3 plus instrument calibration	Approved on 24 January 2006
4.2-44b	Environmental	synthetic air	dichloromethane	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/4 plus instrument calibration	Approved on 24 January 2006

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NMI Service Identifier	Measurement Service Category	Matrix	Mesurand		Dissemination Range of Measurement Capability			Range of Expanded Uncertainties as Disseminated				Range of Certified Values in Reference Materials			Range of Expanded Uncertainties for Certified Value				Mechanism(s) for Measurement Service Delivery	Comments
			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
4.2-50a	Environmental	nitrogen	trichloroethylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/5 plus instrument calibration	Approved on 24 January 2006
4.2-50b	Environmental	synthetic air	trichloroethylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/6 plus instrument calibration	Approved on 24 January 2006
4.2-51a	Environmental	nitrogen	tetrachloroethylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/7 plus instrument calibration	Approved on 24 January 2006
4.2-51b	Environmental	synthetic air	tetrachloroethylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/8 plus instrument calibration	Approved on 24 January 2006
4.2-52a	Environmental	nitrogen	1,2-dichloroethane	Amount-of-substance fraction	0.05	100	µmol/mol	4	3	%	Yes	0.05	100	µmol/mol	6	4	%	Yes	PRM SM 06.02.030/9 plus instrument calibration	Approved on 24 January 2006
4.2-52b	Environmental	synthetic air	1,2-dichloroethane	Amount-of-substance fraction	0.05	100	µmol/mol	4	3	%	Yes	0.05	100	µmol/mol	6	4	%	Yes	PRM SM 06.02.030/10 plus instrument calibration	Approved on 24 January 2006
4.2-54a	Environmental	nitrogen	v vinyl chloride	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/13 plus instrument calibration	Approved on 24 January 2006
4.2-54b	Environmental	synthetic air	v vinyl chloride	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/14 plus instrument calibration	Approved on 24 January 2006
4.2-55a	Environmental	nitrogen	carbon tetrachloride	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/15 plus instrument calibration	Approved on 24 January 2006

**Amount of substance, Gases, Russian Federation, VNIIM (D.I. Mendeleyev Institute for Metrology, Rostekhregulirovaniye of Russia)**

Note: In the case where an uncertainty range is given, the expanded uncertainty range is expressed as the uncertainty of the smallest value of the quantity to the uncertainty of the largest value of the quantity.

Note: The expanded uncertainties correspond to  $k = 2$  (level of confidence 95%)

NMI Service Identifier	Measurement Service Category	Matrix	Mesurand		Dissemination Range of Measurement Capability			Range of Expanded Uncertainties as Disseminated				Range of Certified Values in Reference Materials			Range of Expanded Uncertainties for Certified Value				Mechanism(s) for Measurement Service Delivery	Comments
			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
4.2-55b	Environmental	synthetic air	carbon tetrachloride	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/16 plus instrument calibration	Approved on 24 January 2006
4.2-56a	Environmental	nitrogen	1,1,1-trichloroethane	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/17 plus instrument calibration	Approved on 24 January 2006
4.2-56b	Environmental	synthetic air	1,1,1-trichloroethane	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/18 plus instrument calibration	Approved on 24 January 2006
4.2-57a	Environmental	nitrogen	o-xylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/19 plus instrument calibration	Approved on 24 January 2006
4.2-57b	Environmental	synthetic air	o-xylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/20 plus instrument calibration	Approved on 24 January 2006
4.2-58a	Environmental	nitrogen	m-xylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/21 plus instrument calibration	Approved on 24 January 2006
4.2-58b	Environmental	synthetic air	m-xylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/22 plus instrument calibration	Approved on 24 January 2006
4.2-59a	Environmental	nitrogen	p-xylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/23 plus instrument calibration	Approved on 24 January 2006
4.2-59b	Environmental	synthetic air	p-xylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/24 plus instrument calibration	Approved on 24 January 2006

**Amount of substance, Gases, Russian Federation, VNIIM (D.I. Mendeleyev Institute for Metrology, Rostekhregulirovaniye of Russia)**

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Note: The expanded uncertainties correspond to  $k = 2$  (level of confidence 95%)

NMI Service Identifier	Measurement Service Category	Matrix	Mesurand		Dissemination Range of Measurement Capability			Range of Expanded Uncertainties as Disseminated				Range of Certified Values in Reference Materials			Range of Expanded Uncertainties for Certified Value				Mechanism(s) for Measurement Service Delivery	Comments
			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
4.2-60a	Environmental	nitrogen	1,1-dichloroethylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/25 plus instrument calibration	Approved on 24 January 2006
4.2-60b	Environmental	synthetic air	1,1-dichloroethylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/26 plus instrument calibration	Approved on 24 January 2006
4.2-61a	Environmental	nitrogen	cis-1,2-dichloroethylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/27 plus instrument calibration	Approved on 24 January 2006
4.2-61b	Environmental	synthetic air	cis-1,2-dichloroethylene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/28 plus instrument calibration	Approved on 24 January 2006
4.2-62a	Environmental	nitrogen	1,1,2-trichloroethane	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/29 plus instrument calibration	Approved on 24 January 2006
4.2-62b	Environmental	synthetic air	1,1,2-trichloroethane	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/30 plus instrument calibration	Approved on 24 January 2006
4.2-63a	Environmental	nitrogen	trans-1,3-dichloropropene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/31 plus instrument calibration	Approved on 24 January 2006
4.2-63b	Environmental	synthetic air	trans-1,3-dichloropropene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/32 plus instrument calibration	Approved on 24 January 2006
4.2-64a	Environmental	nitrogen	cis-1,3-dichloropropene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/33 plus instrument calibration	Approved on 24 January 2006

**Amount of substance, Gases, Russian Federation, VNIIM (D.I. Mendeleyev Institute for Metrology, Rostekhregulirovaniye of Russia)**

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Note: The expanded uncertainties correspond to  $k = 2$  (level of confidence 95%)

NMI Service Identifier	Measurement Service Category	Matrix	Mesurand		Dissemination Range of Measurement Capability			Range of Expanded Uncertainties as Disseminated				Range of Certified Values in Reference Materials			Range of Expanded Uncertainties for Certified Value				Mechanism(s) for Measurement Service Delivery	Comments
			Analyte or Component	Quantity	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?	From	To	Unit	From	To	Unit	Is the expanded uncertainty a relative one?		
4.2-64b	Environmental	synthetic air	cis-1,3-dichloropropene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/34 plus instrument calibration	Approved on 24 January 2006
4.2-65a	Environmental	nitrogen	ethyl benzene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/35 plus instrument calibration	Approved on 24 January 2006
4.2-65b	Environmental	synthetic air	ethyl benzene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030/36 plus instrument calibration	Approved on 24 January 2006
4.2-66	Environmental	nitrogen	benzene	Amount-of-substance fraction	0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes	PRM SM 06.02.030 plus instrument calibration	Approved on 24 January 2006
			chloroform		0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes		
			dichloromethane		0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes		
			trichloroethylene		0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes		
			tetrachloroethylene		0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes		
			1,2-dichloroethane		0.05	100	µmol/mol	4	3	%	Yes	0.05	100	µmol/mol	6	4	%	Yes		
			v vinyl chloride		0.05	100	µmol/mol	3	2	%	Yes	0.05	100	µmol/mol	5	3	%	Yes		